

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of)
)
Amendment of the Commission's)
Rules and Regulations to Increase)
Subscribership and Usage of the)
Public Switched Network)

CC Docket No. 95-115

MAR 29 1996

REPLY COMMENTS OF THE
NATIONAL TELECOMMUNICATIONS AND INFORMATION ADMINISTRATION

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The National Telecommunications and Information Administration (NTIA), which is part of the Department of Commerce, is the Executive Branch agency responsible for the development of domestic and international telecommunications and information policy on behalf of the President. NTIA respectfully replies to comments submitted in response to the Commission's Notice of Proposed Rulemaking (Notice) in the above-captioned proceeding.^{1/}

I. INTRODUCTION AND SUMMARY OF POSITION

For more than six decades, the United States has been committed to universal service -- the idea that every American household that desires it should have telephone service. As the Commission points out, however, "universal service policies may now have greater societal consequences than in the past."^{2/}

^{1/} Amendment of the Commission's Rules and Policies to Increase Subscribership and Usage of the Public Switched Network, 10 FCC Rcd 13003 (1995) (Notice). Unless otherwise noted, all subsequent citations to "Comments" shall refer to pleadings filed on September 27, 1995 in the foregoing docket.

^{2/} Id. at 13004, ¶ 4.

Today, a telephone line does not merely connect an individual to neighbors and loved ones; with the addition of a computer and a modem, it furnishes a pathway to the Information Age, offering enhanced employment and educational opportunities, promising more effective delivery of health care and other social services, and improving communication between citizens and their governments. In this environment, households without telephone service will not only be denied access to valuable information, services, and products that can improve their lives, they may be relegated to an "information ghetto," out of the mainstream of American culture and commerce, and walled off still further from economic and social advancement. For these reasons, the Commission and the States should place a high priority on devising programs and strategies to increase telephone penetration.

NTIA has conducted two empirical studies that bear on two aspects of the subscribership debate. First, in a July 1995 report entitled Falling Through the Net: A Survey of the "Have Nots" in Rural and Urban America, NTIA used November 1994 Census data to construct an expansive profile of universal service in America that includes not only telephone subscribership, but computer and modem ownership as well. NTIA found, among other things, that despite the nation's high level of telephone penetration in the aggregate, subscribership levels among certain parts of American society -- particularly among the poor and minority groups -- are substantially below the national average.

Second, an econometric analysis of that Census data reveals a positive and significant relationship between telephone penetration and a State's adoption of a "no-disconnect" policy, which bars local exchange carriers from disconnecting local telephone service for nonpayment of long distance charges. This relationship is particularly pronounced among low-income households.

Because universal service policies implicate interstate services that are subject to regulation by the Commission, as well as intrastate services that are subject to regulation by the States, development of those policies should be a collaborative effort between the Commission and the States. NTIA urges Federal and State regulators to take the following steps:

- First, the Commission should set as a national goal that within each State by the year 2000 average telephone penetration rates for all households, including in particular several designated economic, racial, ethnic, and geographic categories, will be at or above the national average that existed as of November 1996.
- Second, the Commission and the States should promote cost effective ways to increase telephone subscribership. States need to have broad latitude in developing and implementing policies and programs designed to meet the national subscribership goal. If the national subscribership goal has not been achieved by the turn of the century, the Commission should reopen this proceeding and determine whether Federal action is necessary to accomplish that objective.

- Third, among the many possible ways to expand telephone penetration, two policies should be given particular attention:
 - The Commission and the Joint Board should encourage all States to bar local exchange carriers from disconnecting local telephone service for nonpayment of interstate long distance charges.
 - The Commission, in conjunction with the States, should explore changes in the Link-Up program that would make subsidized connection available to low-income households more frequently.
- Fourth, the Commission and the Joint Board should address, in the context of subscribership, issues concerning access to advanced services, such as the extent to which under-represented groups have access to computers and modems, and the ability of all Americans to connect to critical information sources via Community Access Centers.

II. THE COMMISSION SHOULD ESTABLISH A NATIONAL SUBSCRIBERSHIP GOAL TO BE ACHIEVED BY THE YEAR 2000

As of November 1995, approximately 94 percent of all U.S. households had a telephone in their home, one of the highest penetration rates in the world.^{3/} Though impressive, the nation's overall rate of telephone penetration masks a number of troubling disparities among certain groups in American society. Those disparities were highlighted in NTIA's July 1995 report Falling Through the Net: A Survey of the "Have Nots" in Rural and Urban America (Falling Through the Net),^{4/} which provided an

^{3/} See Alexander Belinfante, Federal Communications Commission, Telephone Subscribership in the United States at 5, Table 1 (FCC Industry Analysis Div., Feb. 1996) (data as of November 1995) (Telephone Subscribership).

^{4/} Jim McConnaughey, Cynthia Nila, and Tim Sloan, National Telecommunications and Information Administration, Falling Through the Net: A Survey of the "Have Nots" in Rural and Urban America (July 1995) (Falling Through the Net) (A copy of this

expansive profile of universal service in America of not only telephone subscribership, but also computer and modem penetration.^{5/} By cross-tabulating subscribership data collected in the Census Bureau's November 1994 Current Population Survey ("CPS") according to several demographic variables (i.e., income, race, ethnicity, age, educational attainment, and region) and three geographic categories (rural, urban, and central city), NTIA confirmed and more specifically pinpointed the discrepancy among geographic, economic, and racial groups in this country with respect to telephone subscribership.^{6/}

As detailed in Falling Through the Net, households without telephones are found disproportionately among the poor and minorities, and within those groups, in rural areas and central cities in particular. For example, measured against the nationwide average for telephone penetration of 93.9 percent, large differentials exist on the basis of income and race/ethnic origin by area. As a group, the very poor in central cities trail the U.S. average by 14 percentage points and those in rural areas are more than a dozen points behind. Even rural and

report is attached hereto as Appendix A).

5/ The report's findings with respect to computer and modem penetration and their policy implications are discussed below in Section V.

6/ NTIA also conducted field hearings on universal service in Albuquerque, New Mexico (December 16, 1993); Los Angeles, California (February 16, 1994); Durham, North Carolina (April 27, 1994); Sunnyvale, California (May 13, 1994); and Indianapolis, Indiana (July 12, 1994).

central-city households with earnings in excess of \$20,000 fall below the national figure, on average. (See Chart 1, Appendix B.)

When the profile is developed by race/ethnic origin and area, the data reveal that several groups are significantly disadvantaged. In rural areas, almost one-quarter of American Indians, Aleuts, and Eskimos as a group are without phones, and approximately one-fifth of Hispanics and Black non-Hispanics are similarly phoneless. And their central city counterparts are also well below the national average. (See Chart 2, Appendix B.)

Using age as the metric, the single most disadvantaged group consists of the youngest households (under 25 years), particularly in rural areas. Not surprisingly, the least educated households have the lowest telephone penetration rates; for a given level of education, central city households generally rank last. Among regions, households in Northeast central cities have the lowest penetration rates.

These discrepancies in subscribership across geographic areas, income levels, and racial and ethnic groups threaten more than ever the economic, cultural, and educational cohesiveness of the nation. Not only do more than 6 million American households lack a telephone for basic needs such as 911 emergency services, access to the workplace, commerce, and each other, they are increasingly in danger of being cut off from the numerous social

and economic benefits promised by access to the Information Superhighway.

For this reason, NTIA urges the Commission to establish the following "National Subscribership Goal": By the end of the year 2000, in each State, the average level of telephone penetration among households meeting certain designated demographic and geographic characteristics should be no less than the nationwide average that exists as of November 1996. In our view, the National Subscribership Goal would provide a lodestar for the Commission and the States as they develop policies and programs to increase subscribership and lend urgency to that task. As importantly, such a goal will establish a well-defined benchmark for assessing the success of those initiatives in achieving their intended objectives.

The Commission should determine which characteristics should be used to identify the U.S. households that will be the focus of government efforts to increase subscribership. NTIA believes, however, that the designated characteristics should include, at a minimum: income, educational attainment, race/ethnic origin, age, household ownership (i.e., home owners versus renters), and geographic location (i.e., rural, urban, central city). CPS data regularly gathered by the Census Bureau can be used to calculate average telephone penetration among households satisfying any one

of the designated categories, or any combination thereof, as well as to track the movements in those levels over time.

III. THE COMMISSION AND THE STATES SHOULD WORK JOINTLY TO
DEVELOP PROGRAMS AND POLICIES TO ACHIEVE THE NATIONAL
SUBSCRIBERSHIP GOAL

The recently enacted Telecommunications Act of 1996 (the "1996 Act") evinces Congress' intent that the development of universal service policy should be a collaborative effort between Federal and State regulators.^{7/} Although the 1996 Act does not specifically address the subscribership issues raised in this Notice, it provides that universal service issues should initially be considered by a Federal-State Joint Board. The 1996 Act directs the Board to give the Commission specific recommendations, which, in turn, may form the basis for Commission decisions on the definition and funding of universal service. The 1996 Act authorizes States to adopt their own universal service rules so long as those rules do not conflict with or burden the Commission's new rules.

The 1996 Act recognizes that universal service policies are most often implemented and affected positively or negatively at the State level. Being closer to telephone subscribers and the companies that serve them, as well as more familiar with local market conditions, State commissions often have better knowledge

7/ See Telecommunications Act of 1996, Pub. L. No. 104-104 (the 1996 Act), § 101, 110 Stat. 56 (1996) (to be codified at 47 U.S.C. § 254).

about which policies are most effective in raising subscribership levels. In addition, States are often effective "laboratories" for testing out new subscribership programs and policies. The record in this Notice demonstrates that many State commissions, together with the companies they regulate, have developed forward-looking programs and service offerings to help vulnerable households in American society obtain and retain telephone service.

For these reasons, NTIA believes that the Commission should work jointly with the States, both through the Joint Board and other means, to find the most effective ways to achieve a universally-accepted goal -- making telephone service available and affordable to all Americans. As part of that process, the Commission should encourage States to implement already tested policies and programs that appear especially promising in their effect on subscribership, but it should also afford States latitude to pursue other innovative solutions.

As noted above, the National Subscribership Goal should be the standard by which we measure the success of this collaborative Federal-State process. The Commission should first try to achieve that goal without detailed national rules and mandates. On the other hand, if the goal has not been reached by the year 2000, the Commission should determine whether Federally-

mandated regulations are needed to raise telephone subscribership to the desired levels.

IV. AMONG THE MANY WAYS TO INCREASE TELEPHONE SUBSCRIBERSHIP, TWO APPROACHES MERIT PARTICULAR ATTENTION

Although the Commission, the States, and the Joint Board should explore the full range of alternatives for increasing telephone subscribership, NTIA believes that they should give particular attention to two approaches that could have a significantly positive impact on subscribership. First, the Commission should encourage all States to adopt a no-disconnect policy, which would bar local exchange carriers (LECs) from terminating local telephone service because of a subscriber's failure to pay interstate long distance charges. Second, the Commission and the States should explore changes in the Link-Up program that would make subsidized connections available to low-income households more frequently.

A. A No-Disconnect Policy Can Boost Subscribership

Of the issues raised in the Notice, none sparked more controversy than the Commission's questions concerning the adoption of a nationwide no-disconnect policy.^{8/} Many LECs and long distance companies strenuously oppose such a policy, arguing

^{8/} According to the Commission, at least 10 States have adopted a no-disconnect policy. Notice, 10 FCC Rcd at 13005 n.12. We note, however, that while the Commission identifies the State of Nevada as adopting a no-disconnect policy, Pacific Telesis asserts that Nevada has never had such a prohibition. See Comments of Pacific Telesis at 16 n.24.

that its implementation will not significantly improve subscribership levels.^{2/} NTIA believes, based on an analysis of data from the Census Bureau's November 1994 CPS, that the opposite is true. As indicated in Tables 1 through 3, telephone subscribership appears to be consistently higher in States with a no-disconnect policy, even after controlling for such important factors as income, race/ethnicity, home ownership, and employment status. The positive relationship between that policy and penetration is especially prominent at lower income levels and dissipates at the higher income levels. In other words, the benefits of a no-disconnect policy appear to be concentrated among the low-income households that would likely have the most difficulty obtaining and retaining telephone service.

^{2/} See, e.g., Comments of BellSouth Telecommunications, Inc. at 3; Comments of Southwestern Bell Telephone Company at 15. Those objections are not universally shared among LECs, however. US West, for instance, "does not generally disconnect for non-payment of interexchange carrier charges in any of its states," Comments of US West at 4-5, even though only five of the commissions in the States in which the company operates have enacted a no-disconnect policy. Similarly, a group of small, rural LECs that commented in this proceeding did not object to a no-disconnect policy. See Comments of Montana Independent Telecommunications Systems, Inc. at 7.

TABLE 1

Telephone Penetration in Households That Own Their Home, Earn Less Than \$5,000 Annually, and Whose Head Is Employed

	States Permitting Disconnection	States Barring Disconnection
White, Non-Hispanic	96.3%	97.6%
Black, Non-Hispanic	90.9%	94.3%
Native American, Non-Hispanic	71.0%	75.0%
Asian, Non-Hispanic	97.6%	98.7%
Hispanic	90.0%	93.5%

TABLE 2

Telephone Penetration in Households That Own Their Homes, Earn Between \$7,500 and \$10,000 Annually, and Whose Head Is Employed

	States Permitting Disconnection	States Barring Disconnection
White, Non-Hispanic	91.4%	84.8% ^{10/}
Black, Non-Hispanic	96.0%	100.0%
Native American, Non-Hispanic	66.7%	100.0%
Asian, Non-Hispanic	76.9%	100.0%
Hispanic	89.9%	100.0%

^{10/} Although subscribership is not uniformly higher in States with a no-disconnect policy, Tables 1-3 indicate that a positive relationship exists between such a policy and subscribership in most instances.

TABLE 3

Telephone Penetration in Households That Own Their Homes, Earn More Than \$75,000 Annually, and Whose Head Is Employed

	States Permitting Disconnection	States Barring Disconnection
White, Non-Hispanic	99.2%	99.2%
Black, Non-Hispanic	98.0%	100.0%
Native American, Non-Hispanic	100.0%	100.0%
Asian, Non-Hispanic	99.4%	98.1% ^{11/}
Hispanic	99.1%	100.0%

Source: November 1994, Current Population Survey, U.S. Census Department

To assess the picture painted by the foregoing tables more closely, NTIA employed a binary logit regression ("logit") on the CPS data.^{12/} The logit enabled us not only to determine whether the relationship between telephone penetration and each of a set of independent variables is positive or negative, but also to estimate its magnitude.

^{11/} See supra note 10.

^{12/} A logit regression is a statistical tool that allows one to estimate the probability that a household with certain characteristics (defined in the regression by a set of independent variables) will make a particular choice (in this instance, to take telephone service). The logit employed is binary because the household may choose between only two alternatives (i.e., to subscribe or not to subscribe). For a detailed discussion of logit models, see R.S. Pindyk and D.L. Rubinfeld, Econometric Models and Economic Forecasts 247-254 (1976).

NTIA's model used three separate types of independent variables: i) price; ii) demographic; and iii) policy. For price variables, we used data developed by Brooks Albery for his paper on telephone penetration -- the average rate per State charged by the Bell Operating Companies (BOCs) for residential dialtone service; the BOCs' average connection charge per State for residential dialtone service; and the combined interstate and intrastate subscriber line charge per State.^{13/} Demographic variables of surveyed households included race/ethnicity, income, level of education, employment, marital status of the head of the household, and whether the dwelling was owned or rented. The policy variables identified whether or not the relevant State had a no-disconnect policy, a Lifeline program, or a Link Up program.

The results of the logit strongly support the notion that a no-disconnect policy will have a significant effect on telephone

^{13/} See Brooks Albery, What Level of Dialtone Penetration Constitutes "Universal Service"?, TELECOM POL'Y, Vol. 19, 1995 (attached to Comments of Sprint). Because Albery used only BOC rates, his data on residential rates and connection charges are subject to criticism that they are not fully representative of LECs as a whole. His approach is nevertheless a reasonable and defensible solution to the difficult problem of developing data on such rates for use in a penetration model. Albery's analysis also included a weighted price index for interstate and intrastate toll service, based on figures contained in the Commission's periodic reports Trends in Telephone Service. That index does not vary from State to State, however. That was not a problem for Albery because his work was a time-series analysis. Because NTIA's analysis rests on cross-sectional data (i.e., data from a single year that varies from State to State), the lack of variation in Albery's toll index in any year means that NTIA could not include it in our model.

subscribership.^{14/} The coefficient associated with the no-disconnect policy (DISCDUM) variable (.115) is both positive and statistically significant at the 95 percent confidence level, which indicates that as the value of DISCDUM increases (e.g., from 0 (a State permits disconnection) to 1 (a State bars disconnection)), the likelihood that a household in that State will have telephone service increases as well. The estimated magnitude of that relationship is given by the odds ratio associated with DISCDUM (1.122). That figure implies that a State's adoption of a no-disconnect policy will increase the odds that a household in that State will have telephone service by a multiplicative factor of 1.122.

The results of the logit can be used to estimate the likelihood that a household or households meeting certain demographic characteristics will have a telephone. Table 4 presents predicted penetration levels for four different types of households. Each household shares several fundamental characteristics: the occupants are married, employed, and live in a State that permits disconnection of local service for nonpayment of long distance charges. For simplicity's sake, we further assume that the State has adopted no Lifeline or Linkup

^{14/} The model's rho-squared, which tests how well the model explains the variation in the independent variables, is .204. Values between .20 and .40 are very satisfactory. See Dan Steinberg and Phillip Colla, LOGIT: A supplementary module by Salford Systems 17 (San Diego, CA, Salford Systems 1994) (citing David Hensher and Lester Johnson, Applied Discrete Choice Modeling (1981)).

programs. The connection charge and monthly bill for residential phone service in that State are assumed to be \$35.00 and \$15.00, respectively. The second column gives the predicted penetration for each type of household, given the underlying assumptions. The third column indicates how that penetration would change if the State were to adopt a no-disconnect policy.

TABLE 4

Characteristics of Household	Predicted Penetration if State Permits Disconnection	Predicted Penetration if State Bars Disconnection
White, Non-Hispanic Annual Income Less Than \$5,000 Rents Home	79.1%	81.0%
Black, Non-Hispanic Annual Income \$10,000-13,000 Rents Home	81.8%	83.5%
Native American Annual Income \$40-50,000 Rents Home	90.8%	91.7%
Hispanic Annual Income Over \$75,000 Owns Home	99.6%	99.7%

Thus, a more exacting analysis of the CPS data confirms the conclusions suggested by Tables 1-3. There is, in fact, a positive and significant relationship between a no-disconnect policy and telephone penetration. Moreover, as the examples demonstrate, that relationship grows weaker as income increases.

More importantly, the potential gains in subscribership attributable to a no-disconnect policy will most likely be concentrated among those households most at risk of being or becoming phoneless. It is those households (which doubtless number in the hundreds of thousands) who today should be the focus of universal service policymaking.^{15/}

^{15/} If, in the future, the Commission determines that a nationwide no-disconnect policy would be in the public interest, NTIA believes that Public Service Commission of Maryland v. FCC, 909 F.2d 1510 (D.C. Cir. 1990), gives the Commission ample authority to preempt the States. We emphasize, however, that preemptive Federal action in this area is permitted because disconnection of local service for nonpayment of interstate long distance charges has two essential characteristics: (1) it impinges on Federal interests by denying a household's ability to receive Federally-regulated communications; and (2) the reasons for local service cutoff lie in the subscriber's actions or inactions with respect to that Federally-regulated service. If, on the other hand, termination of local service is triggered by a subscriber's conduct concerning a service wholly within the State's jurisdiction (such as a failure to pay intrastate toll charges), Federal preemption would not be justified, even though such disconnection would indirectly affect Federal interests. See id. at 1515 n.6.

Bell Atlantic contends that the Maryland decision bars the Commission from adopting a national no-disconnect policy. See Comments of Bell Atlantic at 10-11. That argument, however, rests on a selective quotation of footnote six of the court's opinion. Read in its entirety, that passage makes plain that the court looked askance only at Commission preemption of State disconnect policies motivated exclusively by actions and interests entirely within a State's jurisdiction under the Communications Act. The tenor of the court's opinion, and its ultimate holding, indicate that the court would likely have upheld a Commission decision barring disconnection of local service for nonpayment of Federally-regulated long distance charges.

B. Policymakers Should Explore Increasing Connection Assistance Under the Link Up Program

The Commission notes that current policies discounting installation charges may be inadequate to ensure reconnection to the network for highly mobile individuals. For example, the Federal Link Up program, which is administered in conjunction with the States, allows States to reduce telephone installation charges for qualified households by paying up to half of the first \$60 of connection charges. The Commission notes that time limits placed on the receipt of this subsidy by some States (of once a year, for example) may undermine the benefit of the subsidy for highly mobile individuals.^{16/}

NTIA agrees with the Commission that further study of expanding Link Up to address the needs of low income, highly mobile individuals is appropriate. Such a study should be undertaken in coordination with the States. As noted by one commenter, there may be more low income, highly mobile populations in urban areas than in rural areas.^{17/} Any changes to the Link Up program, therefore, must allow States flexibility to address their own particular subscriber demographic situations. Furthermore, any expansion of the program should

^{16/} Notice at 13012, ¶ 38.

^{17/} See Comments of Montana Independent Telecommunications Systems at 8.

produce benefits that outweigh the costs of such expansion.^{18/} To keep costs down it may be appropriate to allow subscribers to receive more frequent assistance with installation charges only if they are also willing to take long-distance blocking options.^{19/}

V. THE COMMISSION AND THE JOINT BOARD SHOULD GIVE PROPER WEIGHT TO THE IMPORTANCE OF ACCESS TO ADVANCED SERVICES

A. Policymakers Should Monitor Access by Under-Represented Groups to Advanced Services as Well as to POTs

Passage of the 1996 Act brings a new dimension to the concept of universal service in this country. As recognized in the 1996 Act, the United States must go beyond our traditional focus on telephone penetration as the sole barometer of the nation's progress towards universal service.^{20/} Clearly, the necessity of a telephone for safety, economic, and social reasons remains strong. Today, however, with the many economic, cultural, and social benefits associated with being connected to

^{18/} In 1994, about 840,000 households received \$18.5 million in Link Up assistance. Notice at 13008, ¶ 23. See also Comments of U.S. West at 9 (recommending a cost-benefit analysis before expanding the Link Up program).

^{19/} See Comments of the National Telephone Cooperative Association at 12.

^{20/} The 1996 Act states, for example, that "Universal service is an evolving level of telecommunications services that the Commission shall establish periodically . . . taking into account advances in telecommunications and information technologies and services." See the 1996 Act, § 101. The 1996 Act also directs the Commission and the States to encourage the deployment of advanced telecommunications capability to all Americans through various methods. See the 1996 Act, § 706.

a vast network of information resources, policymakers also should be monitoring Americans' ability to access advanced services.

In Falling Through the Net, NTIA developed a profile of universal service in America that went beyond telephone service to include computer and modem ownership.^{21/} At NTIA's request, the Census Bureau included a series of questions on computer/modem ownership and use in its CPS for November 1994. The data gathered reflect many of the same geographic and demographic disparities that exist with respect to telephone subscribership. For example, although the national average for personal computer penetration is 25.5 percent of all households, only those households with incomes of \$35,000 or more exceed this average. (See Chart 3, Appendix B.) Viewed by race/origin, all groups in rural areas -- including white non-Hispanics -- except for Asians or Pacific Islanders fail to match or better the U.S. figure. In central city areas, where such penetration is generally much higher, the rates for Black non-Hispanics and Hispanics still fall far short. (See Chart 4, Appendix B.)

The national penetration level for computer households with a modem is 45.5 percent, and again certain segments of the population have not kept up. Strikingly, in rural areas, only those with household incomes greater than \$50,000 generally surpass the nationwide average. In central city households,

21/ See Falling Through the Net, supra note 4.

levels are generally much higher, but not until household incomes reach \$35,000 is the national figure exceeded, on average. (See Chart 5, Appendix B.) While some race/origin categories exhibit rather high penetration rates, many do not, and almost no minority groups manage to beat the U.S. rate. (See Chart 6, Appendix B.)

These disparities in the ownership of the equipment needed to exploit the benefits of the information superhighway threaten more than ever the economic, cultural, and educational cohesiveness of the nation. While the Commission has long monitored telephone subscribership numbers on a highly-disaggregated basis, the time has come for this effort to be expanded to include computers and modems. In view of the directives in the 1996 Act, NTIA recommends that the Commission and the States undertake an effort to monitor access to such equipment at both a national and detailed disaggregated level along the lines described in Falling Through the Net. NTIA and the Census Department stand ready to provide any assistance in this effort that will be necessary. Accurate statistics of this type will help Federal and State regulators develop appropriate policies to ensure that all Americans have access to increasingly important information networks.

B. In Implementing the 1996 Act's Universal Service Provisions, the Commission, the States, and the Joint Board Should Consider the Importance of Community Access Centers in Providing Universal Access to Advanced Services

The Census data also indicates that seven in eight households do not have both a computer and a modem and are, therefore, unable to access more advanced information networks, such as the Internet or other on-line services, from home. In light of the importance access to information services is having on the ability of individuals to compete and prosper, NTIA believes that transitional steps should be taken to promote such access. Ideally, all Americans that desire access should have it and individual household connections to the information superhighway should remain a long-term national goal. For the immediate future, however, NTIA believes that "community access centers" (CACs) are a viable, important interim solution. This belief is shared by a number of States, the National Information Infrastructure Advisory Council (NIIAC), and a variety of private sector organizations.^{22/}

^{22/} The NIIAC, which counsels the Administration's Information Infrastructure Task Force, is a thirty-six member advisory panel comprised of representatives of the private sector; State and local governments; and community, public interest, education, and labor groups. The NIIAC has stated that a "short term national goal should be set to deploy NII access and service capabilities to all community-based institutions that serve the public, such as schools and libraries, by the year 2000." See NIIAC, Common Ground: Fundamental Principles for the National Information Infrastructure, March 1995, p.8. Even those who strongly advocate that NII access to all homes is far superior to any other arrangement still acknowledge the usefulness of access to public institutions "as a transitional step towards full in-home access." See, e.g., Comments of Alliance for Public Technology at 1, in NTIA's Inquiry on Universal Service and Open Access

CACs are community institutions where the public can access advanced telecommunications networks or services. Schools and libraries historically have served as CACs for education and community development and have an integral role to play in advancing the universal service goals embodied in the 1996 Act. The 1996 Act has given impetus to the Administration's goal of connecting the nation's schools, libraries, and hospitals by the year 2000 by requiring telecommunications carriers to provide services to such institutions at discounted rates set by the Commission and the States.^{23/} The Commission and the States should move swiftly to implement that critical provision of the 1996 Act, to ensure that these vital institutions are connected to the Information Superhighway.

In addition to their traditional roles, NTIA envisions schools and libraries as the "hub" for wider community networks that will play a fundamental role in furthering universal access to advanced telecommunications and information services. Over the past two years, NTIA's Telecommunications Information and Infrastructure Assistance Program (TIIAP) has provided matching funds to 210 projects throughout the country to promote a vast array of community-based network infrastructure development. Through grass-roots, public-private partnerships, many TIIAP grantees have used schools and libraries as platforms to reach

Issues (submitted Dec. 14, 1994).

^{23/} See the 1996 Act, § 101.